Electronic Version
Stylesheet Version v1.1.1

Claims

[c1] What is claimed is:

1. A remote terminal emulation system for timely presenting data in serial signal form outputted from a host system on a terminal of a remote computer system via a network system, the remote terminal emulation system comprising:

an information converting apparatus comprising:

a serial signal interface electrically connected to the remote computer system for transmitting the data in serial signal form;

a network interface electrically connected to the network system for transmitting network packets; and

a converting unit for converting data between serial signal form and network packet form; and

a terminal emulation unit installed inside the remote computer system for presenting the data in serial signal form on the terminal of the remote computer system according to a terminal emulation method so as to provide a remote-control function when the remote computer system receives the data in network packet form from the host system via the network system.

[c2] 2. The remote terminal emulation system of claim 1 further comprising a link unit installed inside the remote computer system and electrically connected to the terminal emulation unit for transferring the data obtained from the host system via the network system from the network interface to the terminal emulation unit for terminal emulation processing.

[c3] 3. The remote terminal emulation system of claim 2 wherein the link unit is a socket designed with an ACTIVEX package.

[c4] 4. The remote terminal emulation system of claim 1 wherein the serial signal interface of the information converting apparatus is an RS-232 interface.

[c5] 5. The remote terminal emulation system of claim 1 wherein the converting unit of the information converting apparatus includes a control unit and a memory with an embedded firmware for converting data between serial form and network packet form.

[c6] 6. The remote terminal emulation system of claim 1 wherein the converting unit comprises an operating system (OS) compatible with a Linux operating system.

[c7] 7. The remote terminal emulation system of claim 1 wherein the converting unit comprises a crypto-module

for encrypting and decrypting data transmitted between the host system and the remote computer system.

[c8] 8. A remote terminal emulation system installed between a host system with an operating system compatible with a UNIX operating system and a remote computer system with an operating system compatible with a WINDOWS operating system for timely presenting data outputted from the host system on a terminal of the remote computer system via a network system, the remote terminal emulation system comprising:

an information converting apparatus for converting the data outputted from the host system into network packets to be transmitted on the network system;

a terminal emulation unit installed inside the remote computer system for presenting the data outputted from the host system on the terminal of the remote computer system according to a terminal emulation method so as to provide a remote-control function when the remote computer system receives the data in network packet form from the host system via the network system; and

a link unit installed inside the remote computer system and electrically connected to the terminal emulation unit for transferring the data obtained from the host system from the network system to the terminal emulation unit for terminal emulation processing.

[c9] 9. The remote terminal emulation system of claim 8 wherein the information converting apparatus comprises:
a serial signal interface electrically connected to the remote computer system for transmitting the data in serial signal form;
a network interface electrically connected to the network system for transmitting the data in network packet form; and
a converting unit for converting data between serial signal form and network packet form.

[c10] 10. The remote terminal emulation system of claim 8 wherein the link unit is a socket designed with an ACTIVEX package.

[c11] 11. A method for remote terminal emulation between a host system and a remote computer system, the method comprising:
inputting at least one data into the remote computer system;
utilizing a terminal emulation unit of the remote computer system to present the data on a terminal of the remote computer system;
transmitting the data in network packet form to an information converting apparatus via a network system;
utilizing the information converting apparatus to convert

the data in network packet form into serial signal form so as to transmit the data in serial signal form to the host system; and
utilizing the host system to process the data in serial signal form.

[c12] 12. The method of claim 11 wherein the host system comprises an operating system compatible with a UNIX operating system, and an RS-232 interface electrically connected to the information converting apparatus for transmitting the data in serial signal from.

[c13] 13. The method of claim 11 wherein the remote computer system comprises an operating system compatible with a WINDOWS operating system, and an input device for allowing a user to input data.

[c14] 14. The method of claim 11 wherein the remote computer system comprises a network interface corresponding with a TCP/IP protocol and electrically connected to the network system for transmitting the data in network packet form.

[c15] 15. The method of claim 11 further comprising utilizing a link unit connected to the terminal emulation unit for transferring the data from the terminal emulation unit to the network system, wherein the link unit is a socket de-

signed with an ACTIVEX package.

[c16] 16. The method of claim 11 wherein the information converting apparatus further comprises a serial signal interface electrically connected to the host system for transmitting the data in serial signal form, a network interface electrically connected to the network system for transmitting the data in network packet form, and a converting unit for converting data between serial signal form and network packet form.

[c17] 17. A method for timely presenting data in serial signal form outputted from a host system on a terminal of a remote computer system via a network system, the method comprising:
utilizing the host system to output data in serial signal form;
utilizing an information converting apparatus to convert the data in serial signal form into network packet form and transmitting the data in network packet to the remote computer system via the network system;
utilizing a link unit of the remote computer system to transmit the data to a terminal emulation unit; and
utilizing the terminal emulation unit to process the data according to a terminal emulation method and transmitting the data processed by the terminal emulation unit to the terminal of the remote computer system so as to

present a virtual image.

[c18] 18. The method of claim 17 wherein the remote computer system comprises a network interface corresponding with a TCP/IP protocol and electrically connected to the network system for transmitting the data in network packet form.

[c19] 19. The method of claim 17 wherein the link unit is a socket designed with an ACTIVEX package.

[c20] 20. The method of claim 17 wherein the information converting apparatus further comprises a serial signal interface electrically connected to the host system for transmitting the data in serial signal form, a network interface electrically connected to the network system for transmitting the data in network packet form, and a converting unit for converting data between serial signal form and network packet form.